



ESO - EUROPEAN SOUTHERN OBSERVATORY

# EUROPEAN SOUTHERN OBSERVATORY

Organisation Européenne pour des Recherches Astronomiques dans l'Hémisphère Austral  
Europäische Organisation für astronomische Forschung in der südlichen Hemisphäre

## DFS Software

### NGAS Acceptance Test Plan & Hands-On Tutorial

VLT-PLA-ESO-19400-3100

Issue 2  
2003-11-26  
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## CHANGE RECORD

| Issue | Date       | Affected Paragraphs(s) | Reason/Initiation/Remarks                     |
|-------|------------|------------------------|---|
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| 2.0   | 2003-11-26 | All                    | Updated with tests for NGAS Cluster (GAR)/JKN |
|       |            |                        |   |
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## 1. PURPOSE & SCOPE

This document serves as a ‘generic’ Acceptance Test Plan, which should be carried out by a ‘costumer’ receiving a new installation of NGAS. The test plan helps the costumer checking that all deliverables have been delivered as expected/promised and that the system is operational. The “NGAS Acceptance Test Plan” should be applied at least once every time a new NGAS System is delivered or when an existing NGAS System is upgraded.

The Acceptance Test Plan at the same time, serves as a ‘hands-on tutorial’, which can be used by the NGAS responsible(s) to train NGAS Operators to ensure that they are capable of carrying out the tasks in connection with the NGAS System as foreseen. The hands-on tutorial can also be used by experienced NGAS Operators to train new NGAS Operators.

Comments and suggestions to improve this Test Plan are welcome and can be send to the NGAS Team in Garching:

[ngast@eso.org](mailto:ngast@eso.org)

If this document is used as a tutorial, it is only necessary to carry out the Test Cases or parts of Test Cases, which are **highlighted**.

Certain Test Cases or even Test Suites are only relevant in certain NGAS Sites. This is clearly marked with “**GAR**”, “**LS**” and “**PAR**”. Some tests cannot be carried out temporarily and are marked with “**SKIP**”.

For complex commands to be given on the Linux shell in connection with the tests, are indicated with:

> <Command>

Tests, which are considered particularly important are marked with “►”. It is recommended to always carry out these tests in connection with an Acceptance Test in case it is necessary to skip certain tests if the time allocated for the tests is limited.

### 1.1 List of Abbreviations/Acronyms

The following abbreviations are used in this document:

| Abbreviation | Explanation                                |
|--------------|--|
| AHU          | Archive Handling Unit.                     |
| DBA          | Database Administration.                   |
| HTTP         | Hypertext Transfer Protocol.               |
| NAU          | NGAS Archiving Unit.                       |
| NBU          | NGAS Buffering Unit.                       |
| NCU          | NGAS Cluster Unit.                         |
| NMU          | NGAS Master Unit.                          |
| NSU          | NGAS Super Unit.                           |
| NG/AMS       | Next Generation Archive Management System. |
| NGAS         | Next Generation Archive System.            |
| OLAS         | Online Archive System.                     |
| SW           | Software.                                  |
| TC           | Test Case                                  |
| TS           | Test Suite                                 |

|            |  |        |                        |
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The following terminology is used in this document:

| <b>Term</b>        | <b>Explanation</b>   |
|--------------------|--|
| Contact Host       | Host that is supposed to be contacted in order to carry out a request. In a cluster configuration the Contact Host will typically be the MNU, which is contacted e.g. to retrieve files from the cluster.  |
| Data Disks         | Refers to the removable hard disk drives in an NGAS Host on which data files are stored.   |
| NGAS Host          | Is a computer (IBM compatible PC) running the NGAS run-time environment.   |
| NGAS Operator      | Person who takes care of the daily operations of the NGAS system.  |
| NGAS SW            | The NGAS SW is the SW used to handle archiving of data etc. It is the heart of NGAS. This SW package is called NG/AMS.   |
| NGAS System        | Refers to an NGAS infrastructure installed e.g. at the telescope site. It usually consists of several NGAS Hosts which are 'synchronized' via the NGAS DB.   |
| NGAS User Accounts | On each NGAS Host there must be two user accounts. These are named "ngasmgr" and "ngas". Former is used to deal with issues related to configuration of the NGAS Host, whereas latter is the run-time account under which the NGAS SW is running. All data archived, log files and other files produced by NG/AMS, are owned by the user "ngas". |
| NGAS WEB Site      | The NGAS WEB Site is used by NGAS Operators to get an overview of the system. It is for instance possible to see which disks are mounted and where and to see which files are archived on which disks. The main URL is: " <a href="http://jewell.hq.eso.org:8080/NGAS">http://jewell.hq.eso.org:8080/NGAS</a> ".                                 |
| OLAS (System)      | Is the Online Archive System running on the DHS machine. It carries out various basic checks on the data to archive and distribute the data to various subscribers.  |
| Test Case          | Is an instruction or a set of instructions to be carried out to test a certain property of the system.   |
| Test Suite         | Is a collection of related Test Cases.   |
| Verbose Mode       | It is possible to run the NG/AMS Server in Verbose Mode whereby logging information is written to stdout according to a level given as input parameter.  |
| Verbose Output     | Log information generated by the NG/AMS Server and written on stdout.  |

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## 2. ACCEPTANCE TESTS

The sections in this chapter contains the tests to be carried out. In the Test Suites, use the following terminology is used to indicate the result of each test:

|   |  |
|---|--|
| √ | The test was carried out successfully.                                 |
| ÷ | The test was carried out but failed.                                   |
| S | The test was skipped.  |
| N | The test was skipped because it was not relevant in the given context. |

The tester should mark the appropriate symbol in connection with each test.

### 2.1 Test Suite: NGAS WEB Interfaces

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| √ | ÷ | S | N |
|---|---|---|---|

The NGAS WEB Site is used by the NGAS Operators to check the condition of the system and to find out where various components (files, disks, computers) are located. It is crucial for the operation and administration of the NGAS System to have access to this WEB site.

The main NGAS WEB Site can be found following the URL:

<http://jewel1.hq.eso.org:8080/NGAS>

Other sites may be available, also local ones. These could be checked as well if critical for operation.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.1.1 ► NGAS WEB Interfaces, Main Page:</b><br>Check that the "NGAS Internal Home Page" is properly loaded and readable.   | √      | ÷ | S | N |          |
| <b>2.1.2 ► Disk Status Tool:</b><br>Check that the "Disk Status Tool" works properly:   | √      | ÷ | S | N |          |
| - Check listed disks.   | √      | ÷ | S | N |          |
| - Click on a disk and inspect specific contents.  | √      | ÷ | S | N |          |
| - Click on the files of one of the disks check the list and a specific file. Also query the information from Observations DB. | √      | ÷ | S | N |          |



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|---|---|---|---|---|--|
| <b>2.1.3 Disk Status Form:</b><br>Check that the "NGAS Disk Status Form" works as expected.   | √ | ÷ | S | N |  |
| <b>2.1.4 Host Status Tool:</b><br>Check in the "Host Status Tool" page if the hosts of interest are correctly displayed. In particular, check if the correct version of the SW is in use (this requires the NGAS Hosts to be Online). | √ | ÷ | S | N |  |
| <b>2.1.5 Archive Frame Search Tool:</b><br>Check that the "Search for Archived Frames" is correctly displayed and works as expected.  | √ | ÷ | S | N |  |
| <b>2.1.6 Last Night Report:</b><br>Check that the "NGAS Last Night Report" page works properly.   | √ | ÷ | S | N |  |
| <b>2.1.7 LS/PAR: Last Archive Frames Tools:</b><br>Check that the "Last Frames Archived" page is working.   | √ | ÷ | S | N |  |
| <b>2.1.8 NGAS Contact Addresses:</b><br>Check the "NGAS Contact Addresses" can be accessed.   | √ | ÷ | S | N |  |

## 2.2 Test Suite: NGAS Documentation

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| √ | ÷ | S | N |
|---|---|---|---|

The documents referred to below, should be available from the NGAS WEB site:

<http://jewell.hq.eso.org:8080/NGAS>

Other sites may be available, e.g. local mirror sites.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.2.1 ► NGAS Op. &amp; Troubleshooting Guide:</b><br>Check that the "NGAS Operations & Troubleshooting Guide" can be accessed and is understood. | √      | ÷ | S | N |          |
| <b>2.2.2 GAR: Disk Recycling Manual:</b><br>Check that the "NGAS Disk Recycling Manual" can be accessed and is understood.                          | √      | ÷ | S | N |          |
| <b>2.2.3 NG/AMS User Manual:</b><br>Check that the "NG/AMS User Manual" is available and understood (at least the relevant sections).               | √      | ÷ | S | N |          |
| <b>2.2.4 SKIP: NGAS System Installation &amp; Config. Man.:</b><br>Check that the "NGAS System Installation & Configuration Manual" is available.   | √      | ÷ | S | N |          |
| <b>2.2.5 LS: Disk Procedures:</b><br>Check that the "Disk Procedures" manual can be accessed and is understood.                                     | √      | ÷ | S | N |          |
| <b>2.2.6 ► NGAS Folder:</b><br>Check that the "NGAS Folder" is available and contains the documents as foreseen.                                    | √      | ÷ | S | N |          |

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### 2.3 Test Suite: NGAS User Accounts (“ngasmgr” and “ngas”)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

For an operating NGAS System two user accounts are used on each NGAS Host. These are called “ngasmgr” and “ngas”. Former is used for administrative tasks to be carried out on the NGAS Host, whereas latter is used by the ‘normal’ NGAS Operator. The NGAS SW (NG/AMS) runs under the account “ngas” and all files and directories on the Data Disks belong to this user.

The purpose of this test is to check if the NGAS User Accounts are correctly defined and can be used for the purpose as foreseen. In addition it is checked if the various tools and utilities needed for operating an NGAS Host are properly installed.

| Test  |      | Result |   |   |   | Comments |
|---|------|--------|---|---|---|----------|
| <b>2.3.1 NGAS User Account “ngasmgr”:</b><br>Log in as user “ngasmgr” on the various NGAS Hosts on the site   | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.3.2 NG/AMS Python Client:</b><br>Check that utility “ngamsPClient” can be executed:<br>- Type “ngamsPClient” on the shell and verify the on-line help.<br>- Type “ngamsPClient –version” and verify that the version is correct. | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.3.3 ► NG/AMS C Client:</b><br>Check that utility “ngamsCClient” can be executed:<br>- Type “ngamsCClient” on the shell and verify the on-line help.<br>- Type “ngamsCClient –version” and verify that the version is correct.    | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.3.4 FITS Checksum Utility:</b><br>Check that utility “utilFitsChecksum” can be executed (type “utilFitsChecksum” on the shell and verify the on-line help).  | NAUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
| <b>2.3.5 NGAS User Account “ngas”:</b><br>Log in as user “ngas” on the various NGAS Hosts on the site   | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.3.6 ► NG/AMS Server:</b><br>Check that NG/AMS Server can be executed:<br>- Type “ngamsServer” on the shell and verify the on-line help.<br>- Type “ngamsServer –version” and verify that the version is correct.                 | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |

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|---|------|---|---|---|---|--|
| <b>2.3.7 NG/AMS Python Client:</b><br>Check that utility “ngamsPClient” can be executed:<br>- Type “ngamsPClient” on the shell and verify the on-line help.<br>- Type “ngamsPClient –version” and verify that the version is correct. | NAUs | √ | ÷ | S | N |  |
|   | NBUs | √ | ÷ | S | N |  |
|   | AHUs | √ | ÷ | S | N |  |
|   | NMUs | √ | ÷ | S | N |  |
|   | NCUs | √ | ÷ | S | N |  |
| <b>2.3.8 ► NG/AMS C Client:</b><br>Check that utility “ngamsCClient” can be executed:<br>- Type “ngamsCClient” on the shell and verify the on-line help.<br>- Type “ngamsCClient –version” and verify that the version is correct.    | NAUs | √ | ÷ | S | N |  |
|   | NBUs | √ | ÷ | S | N |  |
|   | AHUs | √ | ÷ | S | N |  |
|   | NMUs | √ | ÷ | S | N |  |
|   | NCUs | √ | ÷ | S | N |  |
| <b>2.3.9 ► FITS Checksum Utility:</b><br>Check that utility “utilFitsChecksum” can be executed (type “utilFitsChecksum” on the shell and verify the on-line help).  | NAUs | √ | ÷ | S | N |  |
|   | AHUs | √ | ÷ | S | N |  |

|            |  |        |                        |
|------------|--|--------|------------------------|
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## 2.4 Test Suite: NG/AMS Server/Host Start-Up/Reboot/Shut-down

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The NG/AMS Server is the main process of an NGAS System. It handles Archive Requests, Retrieve Requests and all other requests sent to the NGAS System. On each NGAS Host there is one NGAS Server running. The server communicates with clients and other NG/AMS Servers using the HTTP protocol.

The purpose of this Test Suite is to verify that the server is running properly and can carry out the requests as foreseen.

All these Test Cases should be carried out as user “ngas”.

| Test  |      | Result |   |   |   | Comments |
|---|------|--------|---|---|---|----------|
| <b>2.4.1 ► NGAS Host Reboot:</b><br>Reboot NGAS Host:<br>- Ensure that monitor/keyboard is connected to the NAU.<br>- Shut down the machine (CTRL-ALT-DEL).<br>- When machine has switched off, switch it on.<br>- Wait until the machine has booted up.<br>- Log in as user “ngas” and type “ps -efww   grep ngams”.<br>- Check that at least five processes are listed. | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
|   |      |        |   |   |   |          |
| <b>2.4.2 ► Host Status, WEB Interfaces:</b><br>Check in the NGAS WEB Interfaces that the NG/AMS Server on the NGAS Hosts appear as “Online/Idle” and that the other fields seem correct (most importantly that the permissions for Archiving, Data Retrieval, Data Removal, Data Processing are correct).   | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.4.3 Disk Mounting:</b><br>Check that the Data Disks are correctly mounted in the system. Log in as user “ngas” and Type “df /NGAS/data*” and verify that the expected number of disks are mounted.   | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.4.4 ► Disk Status, WEB Interfaces:</b><br>Check in the NGAS WEB Interface that the Data Disks appear as mounted as expected.   | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |
| <b>2.4.5 NGAS Disk Info XML Document:</b><br>Check that the NGAS Disk Info XML Documents are correctly generated for the disks. Type “more /NGAS/data*/NgasDiskInfo” and verify briefly the contents of the “NgasDiskInfo”  | NAUs | ✓      | ÷ | S | N |          |
|   | NBUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
|   | NCUs | ✓      | ÷ | S | N |          |

|            |  |        |                        |
|------------|--|--------|------------------------|
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|  |      |   |   |   |   |  |
|--|------|---|---|---|---|--|
| documents.   |      |   |   |   |   |  |
| <b>2.4.6 ► NG/AMS Server Running:</b><br>Check that the NG/AMS Server is running. Type:<br><pre>&gt; ngamsCClient -port 7777 -host &lt;Host Name&gt; -status -cmd STATUS</pre> Verify that output indicates that the server is "Online/Idle".  | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |
|  | NCUs | ✓ | ÷ | S | N |  |
| <b>2.4.7 NG/AMS Configuration:</b><br>Verify that the correct configuration file is used by the NG/AMS Server. The file is pointed to by the link "/opsw/packages/cfg/ngamsServer.conf".   | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |
|  | NCUs | ✓ | ÷ | S | N |  |
| <b>2.4.8 NG/AMS Log File:</b><br>Verify that the NG/AMS Server Log File is correctly updated. Type "tail /NGAS/ngams_staging/log/LogFile.nglog" and verify that there are recent entries in the log.   | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |
|  | NCUs | ✓ | ÷ | S | N |  |
| <b>2.4.9 ► NG/AMS Server Termination:</b><br>Terminate the NG/AMS Server. Issue the commands "OFFLINE" and subsequently "EXIT" to the server. Check that the replies are OK.   | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |
|  | NCUs | ✓ | ÷ | S | N |  |
| <b>2.4.10 NG/AMS Server Verbose Mode:</b><br>Start the NG/AMS Server in Verbose Mode. In an x-terminal, type:<br><pre>&gt; ngamsServer -v 3 -cfg /opsw/packages/ngamsServer.conf -autoOnline</pre> Check that the Verbose Output indicates that the server goes into Online State as foreseen. | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |
|  | NCUs | ✓ | ÷ | S | N |  |
| <b>2.4.11 CTRL-C Kill NG/AMS Server:</b><br>Kill the server by pressing "^C" ("CTRL-C") in the terminal where the server is running in Verbose Mode. Verify that the server terminates as expected.  | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |
|  | NCUs | ✓ | ÷ | S | N |  |
| <b>2.4.12 Host/Server Reboot/Restart:</b><br>Re-start the server by re-booting the host (CTRL-ALT-DEL). Check that the server is running properly after reboot.  | NAUs | ✓ | ÷ | S | N |  |
|  | NBUs | ✓ | ÷ | S | N |  |
|  | AHUs | ✓ | ÷ | S | N |  |
|  | NMUs | ✓ | ÷ | S | N |  |

|            |   |        |                        |
|------------|---|--------|------------------------|
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## 2.5 Test Suite: NG/AMS Ingest (“ngamsIngest”)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The NG/AMS Ingest process is the interface between the OLAS System and NGAS. It receives the data files from OLAS and ensures that this is delivered in a safe way to the NGAS System.

This Test Suite is only relevant in configurations where OLAS is used as ‘front-end archiving system’.

| Test   | Result |   |   |   | Comments |
|--|--------|---|---|---|----------|
| <b>2.5.1 LS/PAR: DHS Machine Reboot:</b><br>Reboot the DHS machine.  | ✓      | ÷ | S | N |          |
| <b>2.5.2 LS/PAR: NG/AMS Ingest Running:</b><br>Check that the process “ngamsIngest” starts properly after a reboot.  | ✓      | ÷ | S | N |          |
| <b>2.5.3 Archive Handling via DHS:</b><br>Produce a file with the instrument(s) served by NGAS and verify that the files are properly archived into NGAS via DHS/frameIngest.<br><br>Note, in order not to contaminate NGAS with test files, it is preferable that this test is carried out during normal operation. | ✓      | ÷ | S | N |          |

|            |  |        |                        |
|------------|--|--------|------------------------|
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## 2.6 Test Suite: Email Notification

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

NGAS uses emails to notify the operators about various problems and events. These are referred to as Email Notification Messages.

The purpose of this Test Suite is to test that it is possible for NGAS to send out such messages. Not all the different types of possible Email Notification Messages are tested.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.6.1 ► Standard Error Email Notification:</b><br>Bring the NAUs online with no disks inserted. Check that an Email Notification Message indicating that there are no Target Disks is send out by NG/AMS.  | ✓      | ÷ | S | N |          |
| <b>2.6.2 ► Email Retention:</b><br>Provoke an error by archiving a bad file repeatedly (10 times):<br><br>> ngamsCClient -port 7777 -host <AHU> -status -cmd ARCHIVE -fileUri /opsw/packages/ngams/-ngamsTest/src/SmallBadFile.fits<br><br>Observe that an Email Notification is sent at the first failed attempt to archive the file. Note, that after the Retention Time-Out has expired the rest of the messaged are send out.   | ✓      | ÷ | S | N |          |
| <b>2.6.3 SKIP - ► Disk Change Notification:</b><br>Configure the AHU to use the configuration NgamsCfg.ESOECF.AHU.TEST.xml. Bring the system Online with test disks inserted. Issue following Archive Request:<br><br>> ngamsCClient -port 7777 -host <AHU> -status -cmd ARCHIVE -fileUri /opsw/packages/ngams/-ngamsTest/src/SmallFile.fits<br><br>Observe that a Disk Change Email Notification is sent out after the Archive Request.<br><br>Execute the command:<br><br>> python /opsw/packages/ngasAccTest/-src/ngasAccCleanUp -tc 2.6.3 | ✓      | ÷ | S | N |          |

## 2.7 Test Suite: Preparation of Mondo Rescue CD (LS/PAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

To facilitate the installation of an NGAS Host, the Mondo Tool-Kit is used (<http://www.microwerks.net/~hugo>). It makes it possible to install a complete Linux system image on an NGAS Host from scratch in a very short time. In the case of NGAS, the Mondo Rescue Image is contained on only one CD and can be installed within ~10 minutes. This means that it is possible to obtain an operating NGAS Host within approximately 15 minutes almost completely automatically, i.e., without much intervention from the operator. The Mondo Rescue Installation can also be carried out by people not knowledgeable about Linux system administration.

|            |   |        |                        |
|------------|---|--------|------------------------|
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For each NGAS Host operating within an NGAS Site, it is recommended to create such a Mondo Rescue CD as back-up media to enable a quick re-installation of each type of NGAS Host.

The purpose of this Test Suite is to verify that it is possible to generate the Mondo Rescue Image and to exercise this operation with the NGAS Operator.

| Test   | Result |   |   |   | Comments |
|--|--------|---|---|---|----------|
| <b>2.7.1 Mondo Creation Manual:</b><br>Read the instructions in the “NGAS Operations & Troubleshooting Manual”.  | √      | ÷ | S | N |          |
| <b>2.7.2 ► Create Mondo Image, NAU:</b><br>On the NAU, create the Mondo Rescue Image according to the instructions. Write the created image onto a CD. | √      | ÷ | S | N |          |
| <b>2.7.3 ► Create Mondo Image, NBU:</b><br>On the NBU, create the Mondo Rescue Image according to the instructions. Write the created image onto a CD. | √      | ÷ | S | N |          |



|            |   |        |                        |
|------------|---|--------|------------------------|
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## 2.8 Test Suite: Configuring of Buffering Unit as Archiving Unit - NBU->NAU (LS/PAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

For a small introduction to the issue of the Mondo Rescue CD, consult Test Suite 2.6.

The purpose of this Test Suite is to verify if it is possible to turn a spare NGAS Host (e.g. the NGAS Buffering Unit) into an NGAS Archiving Unit using a Mondo Rescue CD created from the installation on the NGAS Archiving Unit.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.8.1 Standard NGAS Host Shut-Down:</b><br>Shut down the NAU (CTRL-ALT-DEL).   | ✓      | ÷ | S | N |          |
| <b>2.8.2 Install Mondo Image:</b><br>Insert the NAU Mondo Rescue CD into the NBU (created in Section 2.6). Boot up the NBU, type “nuke” at the Mondo prompt. Answer the questions to be answered.                                 | ✓      | ÷ | S | N |          |
| <b>2.8.3 User Account “ngas”:</b><br>The NBU should now be configured as was previously the NAU. To verify this, log in as user “ngas” and check the hostname on the prompt.  | ✓      | ÷ | S | N |          |
| <b>2.8.4 NG/AMS Server Running:</b><br>In the NGAS DB (Host Status), check that the NG/AMS Server is running as it ought to on the ‘new’ NAU.   | ✓      | ÷ | S | N |          |
| <b>2.8.5 Disk Status:</b><br>Check that the disks inserted into the new NAU appear as Online in the NGAS DB.  | ✓      | ÷ | S | N |          |
| <b>2.8.6 Archive Handling:</b><br>Archive a file into the NAU. Type:<br><br>> ngamsPCClient -port 7777 -host <Host Name AHU> -status -cmd ARCHIVE -fileUri /opsw/packages/ngams/ngamsTest/src/SmallFile.fits<br><br>on the shell. | ✓      | ÷ | S | N |          |
| <b>2.8.7 File Status in NGAS DB:</b><br>Check in the NGAS WEB Interface, that the archived file has now been registered.  | ✓      | ÷ | S | N |          |
| <b>2.8.8 Archiving via DHS:</b><br>If DHS is used as front-end: Create a file with the instrument(s) archiving their data into NGAS and check that this is archived as expected in NGAS.  | ✓      | ÷ | S | N |          |
| <b>2.8.9 Rollback to NBU Configuration:</b><br>Re-install the NBU with the NBU Mondo Rescue CD, reboot it, and check that it is running as expected after boot up.  | ✓      | ÷ | S | N |          |
| <b>2.8.10 Check NAU:</b><br>Boot up on the ‘old’ NAU and verify in the NGAS WEB Interfaces that the NG/AMS Server starts up as expected.  | ✓      | ÷ | S | N |          |

|            |  |        |                        |
|------------|--|--------|------------------------|
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## 2.9 Test Suite: Data Consistency Checking

Overall Test Suite result:



The NG/AMS Server can carry out a check of the ‘health’ of data stored on disks inserted in an NGAS Host. This Data Consistency Checking, serves the goal of preventing loss of data. In case e.g. a bad file is encountered in one data holding, this file should be replaced by a copy of the same file from another NGAS Site.

The Data Consistency Check is executed cyclically by the NG/AMS Server as a background process (internal thread) with a frequency specified in the NG/AMS Configuration File. It is also possible to switch off completely the Data Consistency Checking.

The purpose of this test is to verify that the Data Consistency Check is working properly.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.9.1 ► Standard Data Consistency Checking:</b><br>Enforce an immediate/continuous Data Consistency Checking (on an NGAS Host hosting a larger amount of data) by setting the configuration parameter “NgamsCfg.FileHandling.DataCheckMinCycle” equal to “00T00:03:00” in the NG/AMS Configuration File. This should be done as user “ngasmgr”. Make a copy of the original configuration file before introducing changes in the configuration file. | ✓      | ÷ | S | N |          |
| <b>2.9.2 ► Data Checking Status, WEB Interfaces:</b><br>Check in the NGAS WEB Pages that the NG/AMS on the host indicates that it is doing Data Consistency Checking.   | ✓      | ÷ | S | N |          |
| <b>2.9.3 Disk I/O:</b><br>Check that there is I/O activity on at least one of the disks.  | ✓      | ÷ | S | N |          |
| <b>2.9.4 Data Error Email Notification Message:</b><br>Optional: If data inconsistencies are found an Email Notification Message should be send to the subscribers of this. Check that this is the case.<br><br>Note, a complete Data Consistency Check may take several hours (for a 8 slot system with 8 x 80 GB disks it takes approximately 8 hours).   | ✓      | ÷ | S | N |          |



*Return to the original configuration file.*

|            |   |        |                        |
|------------|---|--------|------------------------|
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## 2.10 Test Suite: Janitor Services

Overall Test Suite result:



The NG/AMS Server has an internal thread (process), which is used to check the condition of the system and to clean up various files and directories. The tasks of the Janitor Thread are:

- Update the DB Snapshot.
- Handle Back-Log Buffered Files.
- Performing Log Rotation.
- Sending out Retained Email Notification Messages.
- Cleaning up Processing Directories and other directories for temporary files.
- Suspending the host + waking up other suspended host in case they request a wake-up-call from this host.

The purpose of this TS is to verify that the tasks allocated to the Janitor Thread are carried out properly.

| Test   |      | Result |   |   |   | Comments |
|--|------|--------|---|---|---|----------|
| <b>2.10.1 ► Handling of DB Snapshot:</b><br>After booting up the host, check the following: <ul style="list-style-type: none"> <li>• DB Snapshot is being created/updated.</li> <li>• That this update is not loading the machine considerably.</li> <li>• That the DB Snapshot is not being updated on Read-Only NGAS Systems.</li> </ul> | NAUs | √      | ÷ | S | N |          |
|  | NBUs | √      | ÷ | S | N |          |
|  | AHUs | √      | ÷ | S | N |          |
|  | NMUs | √      | ÷ | S | N |          |
|  | NCUs | √      | ÷ | S | N |          |
| <b>2.10.2 Handling of Back-Log Buffered Files:</b><br>TBD.   |      | √      | ÷ | S | N |          |
| <b>2.10.3 Log File Rotation:</b><br>TBD.   |      | √      | ÷ | S | N |          |

|            |   |        |                        |
|------------|---|--------|------------------------|
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## 2.11 Test Suite: Disk Preparation (GAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The purpose of this TS is to verify that disks can be properly prepared.

| Test   | Result |   |   |   | Comments |
|--|--------|---|---|---|----------|
| <b>2.11.1 ▶ Format disk:</b><br>Insert a disk in the AHU and bring it Online. Invoke the disk preparation tool:<br><br>> python /opsw/packages/ngasUtils/src/-ngasDiskFormat.py<br><br>Format the disk + create a file system using this tool. | ✓      | ÷ | S | N |          |
| <b>2.11.2 ▶ Preparation of a Single-Disk Disk Set:</b><br>Insert a single disk in the AHU in one of the Storage Slots (Single Disk Set slots). Bring the host Online and check that the disk is registered properly.                           | ✓      | ÷ | S | N |          |
| <b>2.11.3 ▶ Print Label:</b><br>Using the NGAS Label Print Tool<br><a href="http://jewell:8080/NGAS/ESOECE/NGAS_print_label">http://jewell:8080/NGAS/ESOECE/NGAS_print_label</a> print out the label for the disk.                             | ✓      | ÷ | S | N |          |
| <b>2.11.4 ▶ Prepare a Double-Disk Disk Set:</b><br>Insert two disks in the slot of a Double-Disk Storage Set. Bring the AHU Online and check that the disks are registered properly. Print labels and stick them on the disks.                 | ✓      | ÷ | S | N |          |

## 2.12 Test Suite: Data Files/Disk Cloning (GAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The purpose of the TS is to verify that disks/files can be cloned

| Test   | Result |   |   |   | Comments |
|--|--------|---|---|---|----------|
| <b>2.12.1 ▶ Normal Cloning:</b><br>Insert a prepared test disk with 10 files in the an NCU. (DB Snapshot must be available). Remove all disks from the AHU except the Single-Disk Disk Set prepared in TS 2.11. Issue a CLONE command:<br><br>> ngamsCClient -port 7777 -host <AHU> -status -cmd CLONE -diskId <Disk ID Main Test Disk> -notifEmail <Email Recipient List><br><br>Verify that the files get cloned as expected in the NGAS WEB Interfaces + using the NGAS Clone Verification Tool (python /opsw/packages/ngasUtils/src/-ngasCloneVerification.py on the AHU). | ✓      | ÷ | S | N |          |



*Remember to possibly clean up the NGAS DB for the entries added for the test files.*

|            |   |        |                        |
|------------|---|--------|------------------------|
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### 2.13 Test Suite: Data Files/Disk Removal (GAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| √ | ÷ | S | N |
|---|---|---|---|

The purpose of this TS is to verify that disks can be properly removed.

| Test   | Result |   |   |   | Comments |
|--|--------|---|---|---|----------|
| <b>2.13.1 ► Standard Disk Removal:</b><br>Execute a REMDISK command on the disk with the cloned files written in TS 2.12:<br><pre>&gt; ngamsCClient -port 7777 -host &lt;AHU&gt; -status -cmd REMDISK -diskId &lt;Disk ID&gt;</pre> Check the output. Actually remove the disk info from the DB + disk contents:<br><pre>&gt; ngamsCClient -port 7777 -host &lt;AHU&gt; -status -cmd REMDISK -diskId &lt;Disk ID&gt; -execute</pre> Check that the disk is removed from the NGAS DB.<br>Check that the contents on the disk is removed (apart from the "<Mount Point>/.db" and the "NgasFiles.bsddb" DB Snapshot file. | √      | ÷ | S | N |          |

### 2.14 Test Suite: Data Files/Disk Registration (GAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| √ | ÷ | S | N |
|---|---|---|---|

The purpose of this TS is to verify that files can be registered properly.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.14.1 Normal File Registration:</b><br>Create a directory on a test disk in the AHU. Copy some test files into the directory. Issue a REGISTER command to register the test files and observe how the files get registered. | √      | ÷ | S | N |          |



*Remember to possibly clean up the NGAS DB for the entries added for the test files.*

|            |   |        |                        |
|------------|---|--------|------------------------|
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## 2.15 Test Suite: Data File Retrieval

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The purpose of this test is to verify that the Data Files and other files can be retrieved properly.

| Test  | Result |   |   |   |   | Comments |
|---|--------|---|---|---|---|----------|
| <b>2.15.1    ► <span style="background-color: yellow;">GAR</span>: Retrieve Archive File:</b><br>Select a file from the NGAS WEB Interfaces to be retrieved. Retrieve it via the Contact Host:<br><br>> ngamsCClient –port 7777 –host <Contact Host> –status –cmd RETRIEVE –fileId <File ID><br><br>Check the contents of the retrieved file using “uncompress” and “utilFitsChecksum”. | NAUs   | ✓ | ÷ | S | N |          |
|   | NBUs   | ✓ | ÷ | S | N |          |
|   | AHUs   | ✓ | ÷ | S | N |          |
|   | NMUs   | ✓ | ÷ | S | N |          |
|   | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.15.2    ► <span style="background-color: yellow;">GAR</span>: Retrieve File via Request Handler:</b><br>Retrieve a file via the Archive Facility Request Handler.  |        | ✓ | ÷ | S | N |          |
| <b>2.15.3    Retrieve NG/AMS Configuration:</b><br>Retrieve the NG/AMS Configuration:<br><br>> ngamsCClient –port 7777 –host <Contact Host> -status –cmd RETRIEVE –cfg<br><br>Check contents of retrieved file.   | NAUs   | ✓ | ÷ | S | N |          |
|   | NBUs   | ✓ | ÷ | S | N |          |
|   | AHUs   | ✓ | ÷ | S | N |          |
|   | NMUs   | ✓ | ÷ | S | N |          |
|   | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.15.4    Retrieve NG/AMS Log File:</b><br>Retrieve the NG/AMS Log File:<br><br>> ngamsCClient –port 7777 –host <Contact Host> -status –cmd RETRIEVE –ngLog<br><br>Check contents of retrieved file.   | NAUs   | ✓ | ÷ | S | N |          |
|   | NBUs   | ✓ | ÷ | S | N |          |
|   | AHUs   | ✓ | ÷ | S | N |          |
|   | NMUs   | ✓ | ÷ | S | N |          |
|   | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.15.5    ► Retrieve Internal File:</b><br>Retrieve the NG/AMS Log File:<br><br>> ngamsCClient –port 7777 –host <Contact Host> -status –cmd RETRIEVE –internal /NGAS/data[1..8]/.db/NgasFiles.bsddb<br><br>Check contents of retrieved file.   | NAUs   | ✓ | ÷ | S | N |          |
|   | NBUs   | ✓ | ÷ | S | N |          |
|   | AHUs   | ✓ | ÷ | S | N |          |
|   | NMUs   | ✓ | ÷ | S | N |          |
|   | NCUs   | ✓ | ÷ | S | N |          |

|            |   |        |                        |
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## 2.16 Test Suite: Archive Handling

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The purpose of this test is to verify that Archive Requests can be handled properly by the system.

| Test  |      | Result |   |   |   | Comments |
|---|------|--------|---|---|---|----------|
| 2.16.1   ► Archive FITS File:<br>Archive a FITS file using the “ngamsCClient”:<br><br>> ngamsCClient –port 7777 –host <Host> -status –cmd ARCHIVE –fileUri /opsw/packages/ngams/ngamsTest/src/Small File.fits<br><br>Observe that the file gets properly registered in the NGAS DB. | NAUs | ✓      | ÷ | S | N |          |
|   | AHUs | ✓      | ÷ | S | N |          |
|   | NMUs | ✓      | ÷ | S | N |          |
| 2.16.2   GAR: Archive VIMOS Pre-Imaging File:<br>Produce a file with VIMOS and make sure it is properly archived.   |      | ✓      | ÷ | S | N |          |

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|------------|--|--------|------------------------|
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## 2.17 Test Suite: Status Handling

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

The purpose of this test is to verify that Status Requests can be handled properly by the system.

| Test   | Result |   |   |   |   | Comments |
|--|--------|---|---|---|---|----------|
| <b>2.17.1 Query Host Status:</b><br>Query the status of the various hosts:<br><br>> ngamsCClient -port 7777 -host <Contact Host> -status -cmd STATUS -hostId <Host ID>   | NAUs   | ✓ | ÷ | S | N |          |
|  | NBUs   | ✓ | ÷ | S | N |          |
|  | AHUs   | ✓ | ÷ | S | N |          |
|  | NMUUs  | ✓ | ÷ | S | N |          |
|  | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.17.2 File Accessibility:</b><br>Select a file from the NGAS WEB Interfaces, check its accessibility:<br><br>> ngamsCClient -port 7777 -host <Contact Host> -cmd STATUS -fileAccessibility <File ID> -fileVersion <Version> [-diskId <Disk ID>]<br><br>Check the returned Status Report. | NAUs   | ✓ | ÷ | S | N |          |
|  | NBUs   | ✓ | ÷ | S | N |          |
|  | AHUs   | ✓ | ÷ | S | N |          |
|  | NMUUs  | ✓ | ÷ | S | N |          |
|  | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.17.3 File Info:</b><br>Select a file from the NGAS WEB Interfaces and retrieve its specific information:<br><br>> ngamsCClient -port 7777 -host <Contact Host> -cmd STATUS -fileId <File ID> -fileVersion <Version><br><br>Check the returned Status Report.                            | NAUs   | ✓ | ÷ | S | N |          |
|  | NBUs   | ✓ | ÷ | S | N |          |
|  | AHUs   | ✓ | ÷ | S | N |          |
|  | NMUUs  | ✓ | ÷ | S | N |          |
|  | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.17.4 Disk Info:</b><br>Select a disk from the NGAS WEB Interfaces and retrieve its specific information:<br><br>> ngamsCClient -port 7777 -host <Contact Host> -cmd STATUS -diskId <Disk ID><br><br>Check the returned Status Report.   | NAUs   | ✓ | ÷ | S | N |          |
|  | NBUs   | ✓ | ÷ | S | N |          |
|  | AHUs   | ✓ | ÷ | S | N |          |
|  | NMUUs  | ✓ | ÷ | S | N |          |
|  | NCUs   | ✓ | ÷ | S | N |          |
| <b>2.17.5 Request Information:</b><br>Retrieve information about a request handled previously:<br><br>> ngamsCClient -port 7777 -host <Contact Host> -cmd STATUS -requestId <Request ID><br><br>Check the returned Status Report.  | NAUs   | ✓ | ÷ | S | N |          |
|  | NBUs   | ✓ | ÷ | S | N |          |
|  | AHUs   | ✓ | ÷ | S | N |          |
|  | NMUUs  | ✓ | ÷ | S | N |          |
|  | NCUs   | ✓ | ÷ | S | N |          |



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## 2.18 Test Suite: Host Suspension/Host Wake Up Service (GAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| ✓ | ÷ | S | N |
|---|---|---|---|

In order to save energy and to spare the NGAS HW, it is possible to configure NGAS Hosts to suspend themselves. It is therefore needed to be able to wake up such suspended hosts if there is a request for this host or if a Data Consistency Checking is due. Therefore, this is typically used in a cluster configuration where a MNU is used to wake up suspended hosts when required.

The purpose of this test is to verify that the host suspension is working properly. In addition to verify that hosts are woken up properly when their next Data Consistency Checking is due or when they are needed to handle a request.

| Test   | Result |   |   |   | Comments  |
|--|--------|---|---|---|---|
| <b>2.18.1 ► NCU Suspension:</b><br>Modify the configuration file of a selected NCU ( <i>make back-up of the original configuration first</i> ). Set the Retention Time-Out to 30 seconds. Also set the period for the Data Consistency Checking to 3 minutes.<br><br>Observe how the NCU suspends itself. Observe how the status for the node is properly updated in the NGAS DB (NGAS Hosts Table). | ✓      | ÷ | S | N | NOTE: Make ngasCfg/cfg/NgamsCfg.ESOECF.- NCU.TEST and use ngasInstall/src/ngasPrepEnv.py to switch between the normal version and the test version. |
| <b>2.18.2 ► MNU→NCU Wake-Up, Data Consistency Due:</b><br>Observe that MNU wakes up NCU when Data Consistency Checking is due.   | ✓      | ÷ | S | N |   |

|            |  |        |                        |
|------------|--|--------|------------------------|
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|  |   |   |   |   |  |
|--|---|---|---|---|--|
| <b>2.18.3 ► MNU→NCU Wake-Up, Retrieve Req./Archive File:</b><br>Make the NCU suspend itself. Select a file from the NGAS WEB Interfaces from that specific NCU. Retrieve it via the NMU<br><br>> ngamsCClient –port 7777 –host <Contact Host> - cmd RETRIEVE –fileId <File ID><br><br>Observe that the MNU wakes up the NCU and that the file is properly retrieved.                   | √ | ÷ | S | N |  |
| <b>2.18.4 MNU→NCU Wake-Up, Retrieve Req./Cfg.:</b><br>Make the NCU suspend itself. Retrieve the NG/AMS Configuration from that specific NCU via the NMU.<br><br>> ngamsCClient –port 7777 –host <Contact Host> - cmd RETRIEVE -cfg<br><br>Observe that the MNU wakes up the NCU and that the file is properly retrieved.   | √ | ÷ | S | N |  |
| <b>2.18.5 MNU→NCU Wake-Up, Retrieve Req./Log File:</b><br>Make the NCU suspend itself. Retrieve the NG/AMS Log File from that specific NCU via the NMU.<br><br>> ngamsCClient –port 7777 –host <Contact Host> - cmd RETRIEVE -ngLog<br><br>Observe that the MNU wakes up the NCU and that the file is properly retrieved.  | √ | ÷ | S | N |  |
| <b>2.18.6 MNU→NCU Wake-Up, Retrieve Req./Internal File:</b><br>Make NCU suspend itself. Issue request to retrieve the Internal File from that specific NCU via the NMU:<br><br>> ngamsCClient –port 7777 –host <Contact Host> - cmd RETRIEVE –internal /etc/hosts<br><br>Observe that the MNU wakes up the NCU and that the file is properly retrieved.                                | √ | ÷ | S | N |  |
| <b>2.18.7 MNU→NCU Wake-Up, Status Req./Host Status:</b><br>Make the NCU suspend itself. Issue a Status Request to retrieve the host status from the specific NCU via the NMU<br><br>> ngamsCClient –port 7777 –host <Contact Host> - cmd STATUS –hostId <Susp. NCU Host ID><br><br>Observe that the MNU wakes up the NCU and that the status of the NCU is properly retrieved.         | √ | ÷ | S | N |  |
| <b>2.18.8 MNU→NCU Wake-Up, Status Req./File Access.:</b><br>Make the NCU suspend itself. Issue a Status Request to retrieve the File Accessibility Status for a file on the specific NCU:<br><br>> ngamsCClient –port 7777 –host <Contact Host> - cmd STATUS –fileAccess <File ID><br><br>Observe that the MNU wakes up the NCU and that the status of the file is properly retrieved. | √ | ÷ | S | N |  |

|            |  |        |                        |
|------------|--|--------|------------------------|
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|---|---|---|---|---|--|
| <b>2.18.9 MNU→NCU Wake-Up, Check-File Request:</b><br>Make the NCU suspend itself. Issue a Check-file Request to check a file on the specific NCU:<br><br>> ngamsCClient -port 7777 -host <Contact Host> -cmd CHECKFILE -fileId <File ID> -fileVersion <Version><br><br>Observe that the MNU wakes up the NCU and that the CHECKFILE command is executed. | √ | ÷ | S | N |  |
|---|---|---|---|---|--|



*Remember to change back to the original NG/AMS Configuration for NCU used for the host suspension tests.*

## 2.19 Test Suite: Robustness (GAR)

Overall Test Suite result:

|   |   |   |   |
|---|---|---|---|
| √ | ÷ | S | N |
|---|---|---|---|

The purpose of this test is to verify that the system is robust and stable.

| Test  | Result |   |   |   | Comments |
|---|--------|---|---|---|----------|
| <b>2.19.1 ► Handling of Lost DB Connection:</b><br>Ensure that an NGAS Node is performing Data Consistency Checking. Ask DBA to kill all DB connections coming from NGAS. Check subsequently: <ul style="list-style-type: none"> <li>That the Data Consistency Checking is resumed.</li> <li>Send an Archive Request and observe that it is handled properly.</li> <li>Send a Retrieve Request and observe that it is handled properly.</li> <li>Send a Host Status Request and observe that it is handled properly.</li> <li>Send an File Accessibility Status Request.</li> </ul> | √      | ÷ | S | N |          |

|            |   |        |                        |
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### 3. CERTIFICATION

The “NGAS Acceptance Test Plan/Hand-On Tutorial” was carried out at NGAS Site:

|          |                 |
|----------|-----------------|
| <b>X</b> | <b>Garching</b> |
| <b>X</b> | <b>La Silla</b> |
| <b>X</b> | <b>Paranal</b>  |

The test was carried out by tester/ NGAS Operator:

\_\_\_\_\_  
Family Name

\_\_\_\_\_  
First Name

Date for carrying out the test, signature of tester:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature